National Aeronautics and Space Administration

John C. Stennis Space Center

LAGNIAPPE

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Return to Flight

STS-114 launch window set

March 11-April 6 has been announced as the possible dates to launch STS-114. However, the Columbia Accident Investigation Board recommendations will be addressed before the Shuttle will be cleared to fly. NASA is not locked into a specific date for returning to flight but will use internal target dates as milestones to keep the process moving forward.

Accident investigation report due

The Columbia Accident Investigation Board is expected to deliver its final report Aug. 26. The report will detail the causes of Columbia's accident and offer recommendations on improving the space flight program.

Return to Flight Task Group members named

NASA on July 25 released the names of the Stafford-Covey Return to Flight Task Group.

The Task Group will perform an independent assessment of NASA's actions to implement the recommendations of the Columbia Accident Investigation Board.

The Task Group is led by Apollo Commander Thomas P. Stafford and Space Shuttle Commander Richard O. Covey.

The Task Group charter and member biographies are available at *www.nasa.gov.*

"What will I do today to help return to safe flight?"

Sean O'Keefe
NASA Administrator

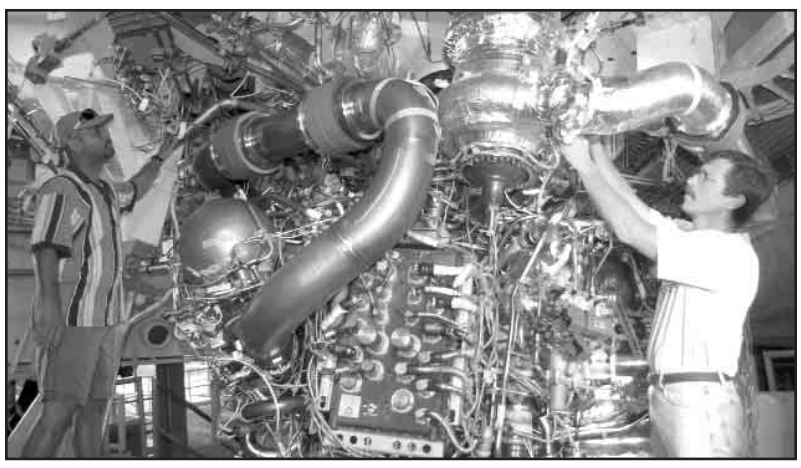
A-2 primed for Shuttle engine test

The A-2 Test Stand at NASA Stennis Space Center has been refurbished and is ready to once again test-fire Space Shuttle Main Engines (SSMEs). The first test is scheduled for Aug. 22 following the 17-month refurbishment project.

The main objective of the first four tests is calibration and reliability demonstration. If those tests prove satisfactory, flight-acceptance testing will then resume.

Initial construction on A-2 began in 1963. On April 23, 1966, the first static firing of the Saturn V second-stage prototype engine was conducted on A-2. The first SSME test on A-2 was April 1, 1976.

The recent modifications to the test stand included replacing the A-2 diffuser, which simulates engine operation at altitude, replacing the carbon steel on the master facility panel and cleaning its components, and replacing the engine-drying system.



Boeing Corp. technicians Rene LeFrere, left, and Matt Seal apply microfoil insulation to the low-pressure fuel turbopump of a Space Shuttle Main Engine on the Stennis Space Center A-2 Test Stand.

The liquid oxygen and liquid hydrogen tanks were tested, certified and painted, and the thrust-measurement system was revamped and recalibrated.

Workers removed asbestos insulation systems, renovated and painted structural elements, and modified special support equipment to improve operations and safety, among other refurbishments.

The A-2 refurbishment team members included NASA, Boeing Corp., Lockheed Martin Space Operations, Mississippi Space Services and offsite contractors.

Stennis Space Center hosts Industry Day 2003

NASA Stennis Space Center (SSC) hosted Industry Day 2003 on Tuesday, Aug. 19, at Bay Tower Hotel's Convention Center in Bay St. Louis.

The event featured presentations and exhibits as a "one-stop shopping day" for industry – particularly small businesses – to explore business opportunities with the federal, state and commercial agencies at SSC.

More than 300 business representatives attended the event. Mississippi Congressman Gene Taylor, SSC Interim Center Director Michael Rudolphi and Rear Adm. Thomas Q. Donaldson V, Commander, Naval Meteorology and Oceanography Command, were among those who addressed the attendees.

Congressman Gene Taylor

Presentations were given by the NASA-SSC Acquisition Management Office, Propulsion Test Directorate, Center Operations Directorate and Technology Development and Transfer Office.

Other SSC agencies giving presentations were the University of Southern Mississippi Department of Marine Science, the Naval Oceanographic Office, the National Data Buoy Center, the U.S. Geological Survey and Lockheed Martin Space Operations.

Many attendees boarded buses to travel to SSC to tour the center as an additional feature of Industry Day 2003.

Industry Day Exhibitors

From the desk of
Michael Rudolphi
Stennis Space Center Interim Director

In a few days the Columbia Accident Investigation Board will release its final report. Although this will most assuredly present many challenges for NASA and Stennis Space Center (SSC), one way we can better prepare to meet those challenges is to remain focused on what we do best – providing world-class service in everything we do.

Quality and safety always remain top priorities for rocket propulsion testing and Earth science applications. Our scientists and engineers are not only required to achieve and maintain the highest quality standards, they must do so while being competitive and improving customer service. Competition is intense in today's global marketplace, and customers have never before impacted the way we do business to the extent they do today. There is no margin for error – any mistake holds the potential to lose customers. The customer is always right.

One of the best ways to ensure SSC continues to provide quality customer service is to take personal responsibility for making it happen – make recommendations, propose new ideas, give suggestions, but most of all, live up to your promises.

Success demands excellence. In order to succeed, everyone at SSC must remain focused on continuous quality and excellent customer service. Stennis has some of the best and brightest people in the world with the knowledge and skills that will guarantee this success and maintain excellence in all we do.

Whether it's Earth science, rocket propulsion testing or any other function at our center, our word is our bond, and meeting commitments is crucial in today's world. Meeting those obligations on time and on budget the first time determines success. Doing this every time determines our future.

I urge everyone to continue to remember ESPRIT and keep it ingrained in everything we do.

Excellence - Safety - People - Respect - Integrity - Teamwork

Executive program aims to strengthen leadership

The Office of Space Flight (OSF) recently announced the implementation of the OSF Corporate Executive Development Program (CEDP) pilot.

The program supports and furthers succession planning by encouraging aspiring senior leaders within the OSF to participate in occupational and/or geographical mobility assignments designed to strengthen leadership and managerial skills and competencies.

William F. Readdy, associate administrator for Space Flight, said, "It's important that we develop the right people at the right time in their careers. Succession planning with the Corporate Executive Development Program is a vital strategy that supports our people, future human space flight missions, One NASA and our NASA Strategic Plan."

Four executives have been identified by their centers and "matched" to select program assignments throughout NASA. The selected executives are G. Alan Flynt, from Johnson Space Center (JSC), assigned as the deputy director, Ames Research Center; David A. Throckmorton, from Marshall Space Flight Center, as the assistant to the director of Stennis Space Center (SSC); Robert M. Lightfoot Jr., from SSC, as the senior systems integration manager, Space Shuttle Program, Code M/Office of Space Flight, NASA Headquarters; and Lesa B. Roe, from JSC, named associate director for business at Langley Research Center.

Vicki A. Novak, assistant administrator for Human Resources, has endorsed the OSF effort with her support of the program in its developmental phases. Novak is committed to collaborating with the OSF to assist in ensuring that NASA's training and development resources are available to augment the career development component associated with this program.

The purpose of the CEDP is to accentuate OSF's endeavor to develop employees to meet NASA's leadership needs in a constantly changing environment. To support this initiative, the CEDP is focusing on developing a Senior Executive Service cadre for OSF corporate leadership positions.

NEWSCLIPS

NASA observations confirm decrease in ozone depletion

NASA satellite observations have provided the first evidence the rate of ozone depletion in the Earth's upper atmosphere is decreasing. This may indicate the first stage of ozone layer recovery.

Scientists from NASA's Langley Research Center and the University of Alabama-Huntsville are analyzing ozone observations from NASA's first and second Stratospheric Aerosol and Gas Experiment and the Halogen Occultation Experiment satellite instruments.

The scientists have found less ozone depletion in the upper stratosphere (22-28 miles altitude) since 1997.

Scientists think stratosphere plays significant weather role

What happens in the stratosphere, the atmospheric layer just above where commercial airplanes fly, may have a larger influence on our climate and weather than previously thought, according to research funded by NASA, the National Oceanic and Atmospheric Administration and the National Science Foundation.

"The stratosphere is an active player in providing memory to the climate system," said Dr. Mark P. Baldwin, senior research scientist at North-West Research Associates, Bellevue, Wash.

Baldwin and his co-authors suggest that changes to the stratospheric circulation can affect weather patterns for a month or more. "This is the key," Baldwin said, "to understanding how the stratosphere can affect our weather."

Asteroids dedicated to Space Shuttle Columbia crew

The final crew of the Space Shuttle Columbia was memorialized in the cosmos Aug. 6 as seven asteroids orbiting the sun between Mars and Jupiter were named in their honor.

The seven asteroids were discovered at the Palomar Observatory near San Diego on the nights of July 19-21, 2001, by former Jet Propulsion Laboratory astronomer Eleanor F. Helin.

1,000 days and counting

A milestone was marked in space July 29 with the 1,000th consecutive day of people living and working aboard the International Space Station.

Since the first crew arrived Nov. 2, 2000, the Station has grown into an unparalleled space laboratory. During the past 1,000 days, the living and working area has increased 6,000 cubic feet, and the Station's 15,000-cubic-foot volume is larger than a three-bedroom house.

Seven Expedition crews, comprised of 10 Americans and 10 Russians, have lived on the Space Station. The crews have conducted 12 spacewalks from the Station, welcomed 11 visiting Shuttles, 10 Russian Progress cargo vehicles and four Soyuz taxi crews.

The Expedition 7 crew currently aboard the Station, Commander Yuri Malenchenko and NASA International Space Station Science Officer Ed Lu, commemorated the 1,000th day of continuous human presence during a live broadcast on NASA TV.

Aboard the Station, research has been conducted in bioastronautics, physical sciences, fundamental space biology, space product development and space flight disciplines.

Next Space Station crew set for Oct. 18 mission

Veteran NASA astronaut Michael Foale and seasoned Russian cosmonaut Alexander Kaleri are set to be the eighth crew to live aboard the International Space Station. They're scheduled to begin their mission Oct. 18 when they launch into space aboard a Russian Soyuz spacecraft.

Foale will serve as the Expedition 8 commander and NASA/International Space Station science officer. Kaleri will be the Soyuz commander and Space Station flight engineer.

Space Shuttle Columbia

Stennis employees get intimate view of debris

Stennis Space Center (SSC) employees gained an intimate association with the Columbia tragedy and realized their important role in return to flight when they visited Kennedy Space Center (KSC).

Two groups traveled to KSC – one on Aug. 11-13, the other on Aug. 18-20 – to view debris from the Space Shuttle Columbia and tour KSC facilities.

The following quotes reflect thoughts from the Aug. 11-13 visit.

SSC employees view debris from the Space Shuttle Columbia assembled at Kennedy Space Center.

At right are SSC employees Terry Bordelon, Bryon Maynard, Dawn Davis, Ron Magee, Judy Cook and Lisa Newbold.

"Having had the opportunity to see the Columbia debris in Texas, it was overwhelming to see the debris all in one place.

Everything that we do at Stennis can be seen in the mission of Kennedy Space Center."

Ron Magee
Deputy Director,
Earth Science
Applications Directorate

"Seeing the debris first-hand was upsetting, but it made me realize even more that we need a quick and safe return to flight.

It is important that all of us at NASA do everything we can to help support a safe return to flight."

Beth Bradley
Contracting Officer

"I feel like I've 'touched' a part of history.

Seeing the debris first-hand provided a sense of sobering reality.

I definitely have a greater appreciation of being a part of the NASA team."

Mattie Kirschenheuter
Secretary,
Office of Education

"I felt an emotional 'connection' and it [seeing the debris first-hand] helped me understand how much time and effort has been spent searching for answers. It made it <u>real</u>.

The tour of the Space Station processing facility enlightened me to how much NASA does, how many partners it has and how important our role is in this country and the world."

Millie Lucco
Secretary,
Earth Science
Applications Directorate

"Walking into the Columbia hangar and seeing the debris sent shivers up my spine.

It amazed me to actually hold a piece of the external tank foam that was the size that struck the orbiter."

Dinna Cottrell
Computer Engineer

"This was a very educating experience. Seeing the debris first-hand was touching, especially having been at Kennedy when STS-107 launched.

This trip was a major incentive to help understand the importance of safety emphasis."

Buddy Newbold
Occupational Safety
Health Specialist

"I felt honored to have the opportunity to see the Columbia debris.

It gave me a sense of closure having worked on Columbia during my tenure at KSC."

Bryon Maynard
Aerospace Technologist,
Propulsion Systems
and Technologies

"I was thoroughly impressed with the forensics involved in piecing together the story behind the tragedy.

My sense of pride and ownership in being on the NASA team has grown deeper roots."

Bob Poncet
Lead,
Program Control Office

2003 Honor Awards recognize employee efforts, contributions

Stennis Space Center (SSC) presented its prestigious NASA Honor Awards on Aug. 14 at a ceremony in the StenniSphere auditorium.

"NASA's Honor Awards recognize the outstanding efforts and contributions of our employees who are committed to the NASA vision and mission," said SSC Interim Center Director Michael Rudolphi.

"Their dedication helps us meet each challenge and accomplish our mission safely, efficiently and effectively," Rudolphi said. "They serve as role models and mentors and examples of personal achievement."

NASA Associate Administrator for Education, Dr. Adena Williams Loston, was the keynote speaker. Loston is the head of NASA's new education enterprise to organize and enhance NASA's education programs.

Public Service Medal

NASA Public Service Medals were awarded to University of Mississippi Chancellor Dr. Robert C. Khayat and David E. Vincent, news director at WLOX-TV 13 in Biloxi.

Under Khayat's leadership, the University of Mississippi has become nationally recognized for developing the next generation of remote sensing and Geographic Information System experts.

Khayat also led the development of the geoinfomatics curriculum at Ole Miss, and has been committed to forging strong relationships between NASA and

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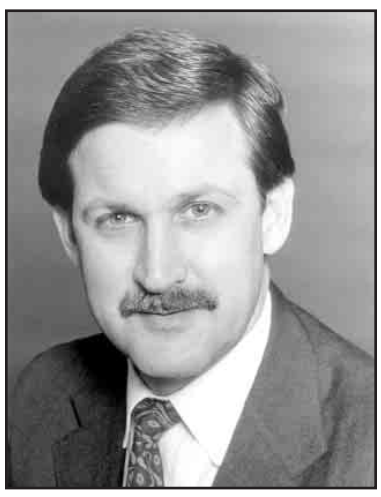
Honor Awards keynote speaker, Dr. Adena Williams Loston, NASA's associate administrator for education, addresses the audience Aug. 14.

PUBLIC SERVICE MEDAL

ROBERT C. KHAYAT
University of Mississippi



PUBLIC SERVICE MEDAL

DAVID E. VINCENT
WLOX-TV 13

EXCEPTIONAL ADMINISTRATIVE ACHIEVEMENT MEDAL

MARY V. KENNEDY
Business Management Directorate

EXCEPTIONAL ACHIEVEMENT MEDAL

CONNIE D. BULEN
Propulsion Test Directorate

EXCEPTIONAL ACHIEVEMENT MEDAL

JENETTE B. GORDON
Center Operations Directorate

EXCEPTIONAL ACHIEVEMENT MEDAL

GLEN M. LIEBIG
Office of Safety and Mission Assurance

EXCEPTIONAL ACHIEVEMENT MEDAL

ELIZABETH A. MESSER
Propulsion Test Directorate

GROUP ACHIEVEMENT AWARD
ROCKET PLUME ENVIRONMENTS TEAM

NASA Marshall Space Flight Center: Mark G. D'Agostino, Young-ching Lee, Tomas E. Nesman, Darren K. Reed, Ten-See Wang and Jeffrey S. West
NASA Stennis Space Center: William W. St. Cyr II and Peter R. Sulyma
Lockheed Martin Space Operations: Russell L. Daines, Lester A. Langford, Gregory P. McVay, William M. Mitchell, Gopal D. Tejwani, David B. Van Dyke and Jody L. Woods **GB Tech:** Gregory J. Richardson

GROUP ACHIEVEMENT AWARD
E-COMPLEX UPGRADES TEAM

NASA: James C. Barnett, Don H. Beckmeyer, David W. Burris, Randall R. Canady, Laurence de Quay, Bryan D. Haas, Robert S. Harris, Wendy T. Holladay, James D. Huk II, Donald E. Kelly, Joseph W. Lacher, David C. Liberto, Glen M. Liebig, Jeffrey W. Lott, Thomas O. Meredith, Scott M. Olive, Vincent R. Pachel, Kevin P. Power, Albert L. Pulley, David E. Roberts, Harry M. Ryan III, Dale. L. Sewell, William W. St. Cyr II, Steven A. Taylor, Mark F. Warren, Stanley C. Warren and Burnley T. Wigley
Lockheed Martin Space Operations: Michael K. Jee, Dale E. Larson, Raymond C. Nichols, Steven W. Poulton, Richard S. Spooner and Kevin L. Necaise
Mississippi Space Services: Louis G. Arceneaux, Kenneth A. Broom, Douglas G. Dike, M. Allen Forsman Jr., Chris T. Johnson, Willie E. Johnson, Frank J. Lorusso, A. Todd Mannion, Robbie D. Miller Jr., Benjamin C. Moore, Richard J. Nyberg, Charles B. O'Connell, Bryant H. Quave and David M. Thomas

GROUP ACHIEVEMENT AWARD
MAINTENANCE AND SCHEDULING COORDINATION TEAM

NASA: Terry D. Addlesperger, Mary R. Byrd and Stanley G. Gill
Boeing Rocketdyne Propulsion and Power: Tracy F. Buras, Jonathan W. Clemens, Jeffrey J. Hansell, Timothy C. Lorenz, William B. McLain, William A. Meadows, Robert S. Moeller, Kendra S. Moran, James O. Mullins (former), Anthony W. Sones and James H. Wahl III
Lockheed Martin Space Operations: S. Kristin Ard, Henry H. Breazeale, Bernie D. Parker, Fran L. Songy, Eric W. Vanderklis and Ronald C. Vaughn
Mississippi Space Services: Craig M. Bramley, Scott A. Langlois, Gerard M. Munchinski, Lauren E. Slavich, Linda L. Stockstill, Jeanette M. Stogner and Frances E. Wade

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the university.

Vincent has helped NASA in its quest to inspire the next generation of explorers by leading WLOX in its extensive coverage of SSC activities.

WLOX's stories about astronauts, Special Olympians, environmental concerns, public engine tests, teacher workshops, student competitions and economic impact have increased public understanding and enhanced public support.

The Public Service Medal is awarded to an individual who is not a government employee and is granted for exceptional contributions to the mission of NASA.

Exceptional Achievement Medal

NASA Exceptional Achievement Medals were awarded to Connie D. Bulen, Propulsion Test Directorate; Jenette B. Gordon, Center Operations Directorate; Glen M. Liebig, Office of Safety and Mission Assurance; and Elizabeth A. Messer, Propulsion Test Directorate.

The NASA Exceptional Achievement Medal is awarded for a significant, specific accomplishment or contribution clearly characterized by a substantial and significant improvement in operations, efficiency, service, financial savings, science or technology that contributes to the mission of NASA.

Exceptional Administrative Achievement Medal

The Exceptional Administrative Achievement Medal was awarded to Mary V. Kennedy of the Business Management Directorate.

The Exceptional Administrative Achievement Medal is given to any person in the federal service for a significant, specific accomplishment or contribution characterized by unusual initiative or creativity that clearly demonstrates a substantial improvement in administrative support contributing to the mission of NASA.

Special Recognition Award J. Harry Guin Outstanding Leadership Award

Douglas K. McLaughlin received the J. Harry Guin Outstanding Leadership Award, which recognizes a deserving individual who has provided exemplary leadership that has significantly enhanced the role, capability or professional recognition of Stennis Space Center within the nation's space, scientific or administrative communities.

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Director's Certificate of Appreciation

Chandra R. Crain received the Director's Certificate of Appreciation Award for contributions to the effective operations of the Office of Human Resources and Development.

Lawrence H. Haselmaier Sr. received the Director's Certificate of Appreciation Award for contributions achieved in technology development, technology transfer and commercialization.

Director's Certificate of Appreciation

Columbia Shuttle Recovery Team

NASA

James E. Anderson, Janet M. Austill, Cabrina D. Bell, Sallie N. Bilbo, Beth L. Bradley, James H. Cluff, Donald E. Coss Jr., Chandra R. Crain, Bruce A. Davis, David J. Del Santo, Mary Gene Dick, Susan D. Dupuis, David P. Failla, Earnest P. Foerman, Troy E. Frisbie, Marco J. Giardino, William D. Graham, Donald R. Griffith, Synthia M. Hill, Randolph R. Holland, Kenneth R. Human, Sharlene M. Kodrin, Millie A. Lucco, Ronald G. Magee, Robert A. Magnuson, Theadore J. Mason, Alan T. Mather, Rodney D. McKellip, Mark W. Mick, Richard L. Miller, James D. Moore, Patricia G. Penton, David L. Powe, Debra K. Rushing, James E. Ryan, Kirk V. Sharp, Linda Ann Sharpe, Michael D. Smiles, Thomas M. Stanley Jr., John E. Stealey, Rebecca A. Strecker, Linda L. Theobald, Katie V. Wallace, Toni L. Watkins, Sandra A. Wescovich, Sherman N. Wilson, Sandra M. Wozniak and Vicki M. Zanoni

Boeing Rocketdyne Propulsion and Power

William E. Hughes and Michael E. McDaniel

Mississippi Space Services

Kimberly A. Levens, April K. Lollar and Barbara D. Marino

University of Mississippi

Donald L. Durham

University of New Orleans

Jeanie Maxwell and Craig A. Peterson

University of Southern Mississippi

Terry R. McPherson

Lockheed Martin Space Operations

Miriam R. Allen, James R. Allgood, Judith A. Berglund, Gisela M. Black, Slawomir S. Blonski, Malinda L. Braland, Richard B. Brown, Stacy E. Brunson, Christopher A. Callac, David J. Carver, Paul E. Cheramie, Samuel R. Cooksey, William Corso, Vyrene W. Crowder, Emma M. Daniels, Deanne C. Dartez, James J. Dixon, Kevin D. Eckhoff, Shannon L. Ellis, Karen A. Ekey, Leland L. Estep, Deborah K. Fendley, Rose M. Fletcher, Jeremy M. Freeman, Melvin J. Fuhrmann, Gerald E. Gasser, Scott J. Gerace, Benjamin S. Goodwin, Arthur B. Grant, Kerry L. Grant, Randall K. Greer, DeNeice C. Guest, Gary L. Harrington, Meagan M. Hemphill, Kara L. Holekamp, Rhonda M. Howard, Dane M. Howell, Denise D. Jarrell, William E. John, Timothy J. Jones, Gregory A. Jones, Kelly B. Knowlton, Philip D. Kuper, Cleon Lacefield, Daymond E. Lavine, Gerard E. Ledet, Richard G. Lightfoot, Julia I. McCann, Lloyd F. McGregor, Clemmie E. McQueen, Roxzana F. Moore, D. Keith Morris, Shannon M. Narcisse, Andrew R. Navard, Lamar B. Nicholson, Dean P. Noel, Maria S. Nunley, Christina M. O'Connor, Daniel F. Olive, Stanford D. O'Neal, Carolyn R. Owen, Mary A. Pagnutti, Laura S. Pair, Joy F. Parikh, Timothy G. Parker, Roddie D. Powell, Shannon L. Ramsay, Ruby A. Robinson-Stubbs, Daniel L. Romines, Kenton W. Ross, Jeffrey A. Russell, Kristen J. Russell, Robert E. Ryan, Lynn B. Schroeder, James E. Seal, Clyde A. Sellers, Richard B. Sellers, James R. Sever, Andrew T. Simpson, Charles M. Smith, Justin W. Smith, Richard A. Smith, William F. Smith, James C. Smoot, Stephen B. Sovick, Joseph P. Spruce, Randy M. Stewart, Wesley C. Tabor, Steven L. Tate, Gregory E. Terrie, Lindsey L. Thornhill, Charlotte M. Timmons, Wallace J. Tyner, Karl H. Wilcox, Marcia E. Wise and Stan K. Woolley

Group Achievement Award

Northeast Corridor Infrastructure Team

NASA: Terence T. Bordelon, Andrew L. Clarke, Kenneth R. Human, Ronald G. Magee, Douglas K. McLaughlin, Patrick E. Scheuermann, Linda C. Slade, Billy W. Walley (former), Charles M. Willis and Dale A. Woolridge **Mississippi Development Authority:** William T. McGlathery **Mississippi Power Company:** Joe B. Bosco **Partners for Stennis:** Larry S. Barnett

Group Achievement Award

Earth Science Applications GADGET Team

NASA: James D. Riser and Dr. Nathan A. Sovik **Lockheed Martin Space Operations:** Gerard E. Ledet **Datastar:** Shannon L. Ramsay and Andrew T. Simpson

Peer Recognition Awards

Executive Excellence
Terry D. Jackson

Terry D. Jackson received the Executive Excellence Peer Recognition Award for his outstanding contributions as chief information officer and Integrated Financial Management Program manager.

Professional Achievement
Scott L. Jensen

Scott L. Jensen received the Professional Achievement Peer Recognition Award for his exceptional creativity and imagination in solving computer control systems problems.

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Special Recognition Awards

NASA Acquisition Improvement Awards

Terry D. Addlesperger for his Source Selection Activities and furtherance of Acquisition Streamlining Initiatives for the Second Generation Reusable Launch Vehicle NRA 8-30 Cycle II

James H. Cluff, Donald E. Coss Jr., David J. Del Santo, Susan D. Dupuis, Terry D. Jackson, Bobby R. Jeffries, Alan T. Mather, T. Wendall Pigott, Linda C. Slade, Kathy L. Spainhower and Sandra M. Wozniak, members of the Security Services Buying Team, for the team's contribution in ensuring an outstanding recompetition of the Security Services Contract

Agency Financial and Resources Management Awards Program

Crystal N. Balentine and Mary C. Whitehead for the efforts to streamline the reimbursable work order processes

NASA Group Achievement Award

Vincent P. Andres for support to Goddard Space Flight Center in awarding the Digital Copier Services Contract

James R. Bryant for contributions to the Small Business Innovation Research and Small Business Technology Transfer programs commercialization success

Dorsie Jones for support to the National Recruitment Initiative Group

David R. Keith for contributions to the Purchase Card Program

NASA's William D. Graham, Rodney D. McKellip, Thomas M. Stanley Jr. and Vicki M. Zanoni and Lockheed Martin Space Operations' Mary A. Pagnutti and Robert E. Ryan for contributions to the Landsat Data Continuity Mission Development Team

Length of Service Awards

25 years

David J. Carstens, Patricia H. Fairley, Donald R. Griffith, Kenneth R. Human, Jane A. Johnson, Kirk V. Sharp, and Stanley C. Warren

30 years

Connie D. Bulen and Wanda F. DeMaggio

PUBLIC SERVICE GROUP ACHIEVEMENT AWARD
TECHNICAL MANAGER'S REPRESENTATIVE TEAM

Lockheed Martin Space Operations: Betty C. Baxter and Robert R. Taggart Jr. **Oologah Technologies Inc.:** Willie J. Eubanks, Penny L. Foret, Rebecca W. McGehee, Michelle S. Mossbrooks, Connie L. Ruhr and Mary E. Washington

PUBLIC SERVICE GROUP ACHIEVEMENT AWARD
NATIONAL WORKFORCE DEVELOPMENT EDUCATION AND TRAINING INITIATIVE TEAM

Global Initiatives Inc.: Chuck A. Chaitovitz, Victor Failmezger and Sarah R. Wasko **InDyne Inc.:** Barbara D. Marino, Marjorie A. Monde and John A. Wilson **Mississippi State University:** Georgia S. Hackney, Liesel A. Ritchie and Jarryl B. Ritchie **University of Southern Mississippi:** Heather M. Annulis, Dr. Jon C. Carr and Dr. Cyndi H. Gaudet

Financial Management employees recognized for achievement

Stennis Space Center (SSC) presented awards on Aug. 14 to employees who made outstanding contributions to development of the Integrated Financial Management Program (IFMP).

The purpose of this agency-wide effort is to modernize and improve NASA's financial and administrative systems and processes.

NASA IFMP Deputy Director Bobby German and SSC Interim Center Director Michael Rudolphi presented the awards, as SSC IFMP Manager Terry Jackson read the citations.

Contractor Teams

Accenture

Rajita Basak, Thomas A. Bertrand, Alycia M. Crabtree, Tamara D. Fields, Andrew R. Krasner, Vivian Y. Liang, Ryan M. Metcalf, Jeffrey T. Mielke and Betty L. Orlopp

Booz-Allen-Hamilton and Associates

Robert L. Bilbrey

Computer Sciences Corporation

Amir J. Khan

Oologah Technologies Inc.

Andrea L. Beaver, Patricia Cabaniss, Christine G. Grapusa, Christy M. Ladner, Deborah H. Martino, Judy J. Piazza, Cynthia P. Powell, Stacey A. Rayburn, Jennifer R. Rolison and Kim M. Zimmerman

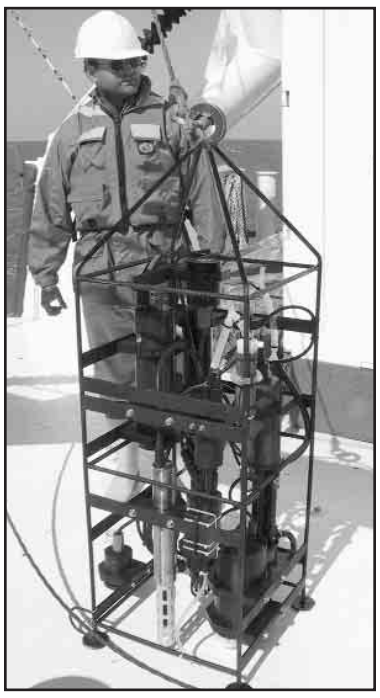
Mississippi Space Services

Michael A. Badon, S. Graham Golden, Eric F. Larsen Jr., Thomas D. Powers, Beverly A. Price, Mary L. Schindele and Sheilah Ware

Lockheed Martin Space Operations

Annabelle Alsobrooks, E. Cherie Beech, Judy L. Carter, Bridget L. Conerly, Regina M. Daigle, Debra M. Dale, Tiffany N. Dease, J. Robert Emry, Diane D. Fulton, Carla J. Guttry, Elizabeth A. Howard, Timothy J. Jones, Allecia S. Kimble, G. Todd Ladner, Richard J. Malley, Philip C. Meridier, Cheryl A. Nelson, James J. Ong, William D. O'Rourke, Ann B. Parker, Rachel

See **IFMP**, next page



ESA's Dr. Carlos E. Del Castillo prepares to collect water samples aboard the Research Vessel Acadiana in the Gulf of Mexico.

Mississippi River plume

Study focused on better coastal management

Researchers from NASA's Earth Science Applications (ESA) Directorate and Program Integration Office (PIO) conducted a research cruise from July 31 to Aug. 3 in waters of the Mississippi River plume, where the river's fresh water meets the Gulf of Mexico. Researchers from the Naval Research Lab at Stennis Space Center (NRL-SSC) and the University of Southern Mississippi (USM) also took part.

The research focused on developing and testing bio-optical algorithms for analysis and verification of satellite imagery from MODIS (Moderate Resolution Imaging Spectrometer) on NASA's Aqua and Terra Earth Observing satellites.

ESA's Dr. Carlos E. Del Castillo and Callie M. Hall, Earth Science Remote Sensing, and PIO's Bruce Spiering, Electronic Instrumentation Systems, collected samples and measured water optical properties in the Gulf.

Dr. Robert Stavn, visiting scientist at NRL-SSC, and Vanessa Wright, graduate student in USM's Department of Marine Science at SSC, also took part in the study.

"We're trying to make sense of how light interacts with mineral and organic particles in the water by collecting and analyzing samples from random locations in the plume," Spiering said.

"Ocean color satellites were designed to work over clear, open ocean waters," he said. "The closer to the coast an image is taken, the more clouded the water becomes with sediment and other materials."

By collecting water samples alongside measurements of water optical properties, researchers can begin to correlate particle characteristics with their influence on the submarine light field. They can then more accurately interpret the light detected by the satellites, making them more valuable in supporting activities like coastal management.

"If we're going to use remote sensing data," Del Castillo said, "we need accurate data. That's a prerequisite. We're trying to establish that first step in the process."

The researchers cruised aboard the Research Vessel Acadiana, operated by the Louisiana Universities Marine Consortium, headquartered in Cocodrie, La.

IFMP ...

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W. Raines, Helena H. Richardson, Randy Taylor, James F. Voss, Judith A. Wheaton and Kelly E. Woods

Perkins Technical Services

Marchaeus L. Bacon, Keith A. Cognevich, Richard F. Flaig and E. Rod Williams

Noteworthy individual contributions

NASA: Cabrina D. Bell, Marina L. Benigno, Beth L. Bradley, Cathey L. Bultman, David J. Carstens, Rebecca E. Deschamp, Freddie Douglas III, Susan D. Dupuis, Jason F. Edge, Gregory Fletcher, Charles D. Hobgood, Olivia J. Hobgood, James D. Huk, Richard J. Gilbrech, Dorsie Jones, Donald E. Kelly, Sandra C. Ladner, Robert M. Lightfoot, Michele H. Logan, Paulette D. Lovingood, Delma J. Moore, Monica M. Moore, Franklyn S. Oerting, Julius J. Oswald Jr., T. Wendall Pigott, David L. Powe, Patrick E. Scheuermann, Karen E. Seals, Linda Ann Sharpe, Kathy L. Spainhower, Batrina F. Street, Andrew J. Valente and Sandra A. Wescovich

Bronze

Fostering teamwork and collaboration.

IFMP Awards recipients

Awarded for individual contribution that goes beyond job performance and positively affects the success of IFM contribution to IFM task or team that results in achievement of substantial project results.

Keith D. Brock, Mark S. Carley, Nick A. Cenci, Wanda F. DeMaggio, Anita W. Douglas, Marco J. Giardino, Mark V. Glorioso, Scot J. Gressaffa and Ronald G. Magee

Silver

Embracing and managing change and cross-Agency collaboration.

Awarded for individual contribution that goes beyond job performance and positively affects the success of IFM. Meeting project milestones and budget commitments while fostering a sense of teamwork.

Crystal N. Balentine, James T. Bevis, Rebecca S. Dubuisson, Nick Etheridge III, Charlene E. Guin, Jane A. Johnson, Mary V. Kennedy, Rena L. Perwien and Christine L. Reynolds

Gold

Achieving project milestones and measurements in an exemplary fashion.

Awarded for superior individual contribution, significantly beyond job performance, that positively affects the success of IFM implementation by employing innovative approaches and solutions to IFMP project challenges.

Cynthia H. Epperson, Jennifer G. Spence, Michael R. Thomas and Mary C. Whitehead

Platinum

Demonstrating exemplary leadership.

Exceptional individual contribution, significantly beyond job performance, that positively affects the success of IFM. Positively influencing others through the exhibition of outstanding teamwork and collaborative behavior.

Leslie L. Anderson, Deborah K. Clarke, Patricia H. Fairley, Terry D. Jackson, David R. Keith, Deborah S. Norton, Timothy I. Pierce and Edward J. Toomey

E-Complex poised to test engines of the future

The E-Complex team at NASA Stennis Space Center (SSC) is working to meet test and development objectives critical to the success of future reusable liquid rocket engines.

Division chiefs and project managers are implementing new methods and facility enhancements to achieve a first for SSC: three test projects of national importance under way at the same time at the three cells of the E-1 Test Stand.

"This is a great opportunity for the entire team to meet this challenge head on," said Miguel Rodriguez, director of the Propulsion Test Directorate (PTD).

During the next two years, SSC employees will become more familiar with terms like IPD, LOX/RP, TR-107 and RS-84.

The IPD (Integrated Powerhead Demonstrator) is the first reusable hydrogen-fueled advanced engine in development since the Space Shuttle Main Engine (SSME). Concurrent with IPD development are two kerosene-fueled (LOX/RP) engines, the TR-107 and RS-84. RP, which stands for rocket propellant, refers to a special blend of kerosene.

"These reusable engine prototypes are foundation designs upon which future flight engines and flight vehicles will be developed," said Dr. Shamim Rahman, chief engineer of SSC's PTD.

SSC and Marshall Space Flight Center in Huntsville, Ala., have partnered with the U.S. Air Force for development of the IPD, with Northrop Grumman for the TR-107, and with Boeing Rocketdyne for the RS-84.

E-Complex is facing this increased workload with a commitment to systems and facility improvement, taking full advantage of three decades of technological advances in design and analysis, experimental techniques, ground testing and system engineering methods.

Lockheed Martin Space Operations' Randy Overton, test complex technician lead (left), and William Fowler, test complex technician, hoist a turbine discharge spool piece into position for installation on the Integrated Powerhead Demonstrator liquid hydrogen pump assembly on the E-1 Test Stand.

Improvements are under way from safety and technical performance to budgeting and scheduling to ensure success of the test projects. "We've made tremendous strides in the quality of our data," said PTD Engineering Division Chief Bartt Hebert, "which is the main product for our customers."

The Systems Analysis and Modeling Group was created in the engineering division to address technical issues. "Their charter is to do pre-test facility data predictions and post-test data analysis to determine facility performance," Hebert said.

The result is quicker test turnarounds by identifying any facility anomalies more quickly. "We do a lot of analysis with our customers on different failure scenarios to determine possible risk and how to mitigate it," Hebert said. "We closely coordinate with them to ensure all requirements are known and all test issues have been mitigated. It's a team effort."

Monthly safety walkdowns have been implemented to identify safety issues and track closure.

To improve budgeting, managers are looking at better ways to forecast and estimate project costs with changing and evolving project requirements.

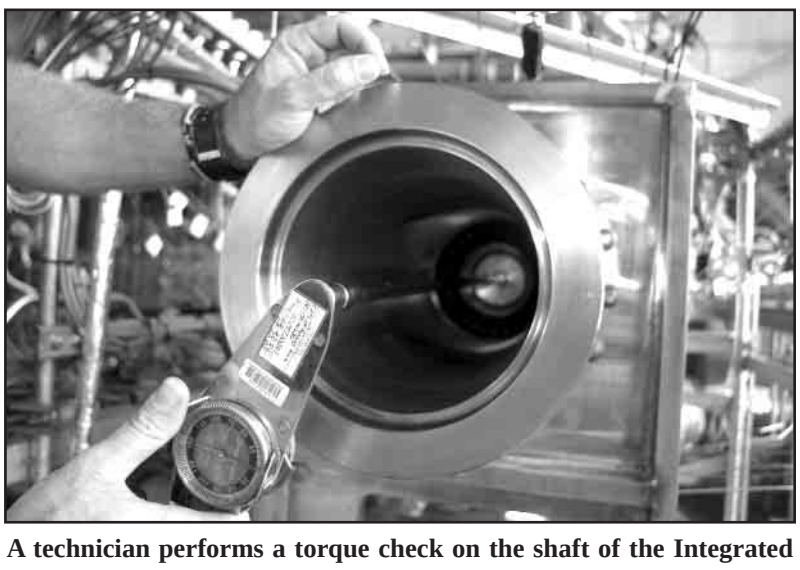
Mark Glorioso, chief of the PTD project management office, is initiating new methods that are in line with NASA's standards for project management. He's developing Master Milestone Schedule agreements that result from defining expectations among everyone involved with the test process.

That schedule stems from more detailed schedules that "tell us what people we need, and when we need them," Glorioso said. The result is that when a schedule is impacted, "we can track it and communicate it to the customer more effectively than before."

Another new feature of test project management is a customer scorecard, designed to get feedback from the customer, enabling managers to contact the customer and reinforce their understanding of the feedback.

E-Complex is poised for some different methods and different looks in the coming months and years, with a new propellant at E-1 to power tests for a new generation of rocket propulsion devices.

"It's all part of leading the effort to advance space technology and committing to carry out our mission for NASA," said Rodriguez. "It's a challenge not only for us in this directorate, but for the center as a whole, and our integrated One NASA team."



A technician performs a torque check on the shaft of the Integrated Powerhead Demonstrator liquid hydrogen pump assembly.

One NASA applies to innovation research

Editor's note: This is one in a series of stories from other NASA centers on the One NASA concept. This month's story is from Glenn Research Center.

When Walter Kim talks about the way NASA's Small Business Innovation Research (SBIR) Program operates, the phrase *E Pluribus Unum* – Out of many, one – comes to mind.

"While each NASA center has its unique capability and technical expertise, we all follow the same process under the SBIR Program," explained Kim, Glenn Research Center's SBIR program manager in the Commercial Technology Office. "The process involves Headquarters and all NASA centers working across the six strategic enterprises for one common goal."

Congress established the SBIR Program in 1982 to ensure that the best and most innovative concepts become part of federal research and development efforts that benefit the nation.

Under the program, NASA field centers identify critical technologies needed to enhance NASA's ability to meet mission goals. Once those needs are established, companies submit proposals explaining how their innovations would support NASA's mission and how they plan to pursue commercial applications for their products. SBIR companies then develop and commercialize their innovations through a three-phase process.

"The center(s) who collaborate with these small businesses are chosen solely for their technical expertise," Kim explained. "Operating under this One NASA philosophy through the years has required the cross-center team to consider all decisions within the context of what is best for NASA rather than for any one center."

Kim stressed the value of strong communication among SBIR managers throughout the centers. Managers meet monthly through videoconferences and attend semiannual program management gatherings, where they invite personnel involved in the SBIR process.

Glenn Research Center SBIR Manager Walter Kim and Chief of Power and Propulsion Sandra Reehorst hold Hall thrusters, a technology area where NASA's SBIR has contributed to improvements in electric propulsion for space applications.

"Many people within and throughout the centers play a vital role in the SBIR process," Kim said. "In fact, more than half of NASA's yearly procurement activities are SBIR-related, and Glenn has oversight for all SBIR procurement policies and guidelines."

Star Scene at StenniSphere Visitor Center

Celebration of Centennial of Flight

- Aug. 29: "From First Flight to Space Flight" Exhibit opens at StenniSphere.
- Sept. 3: Presentations at 10 a.m. and 1:30 p.m. by Col. Rich Graham, former commander of the SR-71 (Blackbird) squadron.
- Sept. 20-21: SSC exhibits at Diamondhead Airport Centennial of Flight.
- Oct. 16-17: One-woman play, "Amelia Lives," about the life of the famous female aviator, Amelia Earhart.

Stargazers visit StenniSphere

During a recent field trip to StenniSphere, Chad Aubert, left, and Jonathan Byrd examine an Aerospike engine, which was tested at Stennis Space Center. Aubert and Byrd are members of the Highland Park Road Observatory's Stargazers Summer Camp in Baton Rouge.

What it's like to test an engine

Members of the Louisiana Drug Abuse Resistance Education Association (DARE) of Covington, La., recently visited StenniSphere. Here, Joseph Thibodeaux and Ariel Perkins try their hands at testing a Space Shuttle Main Engine in the Test Control Center exhibit.

Students design, launch payload as summer project

Two student interns, Matthew Sykes and Tyler Robertson, spent this summer at NASA Stennis Space Center (SSC) building a high-performance rocket and designing and launching a payload that met a specified technical scientific application. Their project, dubbed the Janus 1 Pathfinder Rocket Launch, was developed under the guidance of John Wilson, InDyne Inc.'s education coordinator at SSC.

With assistance from mentor Dr. Stacey Lyle, a professor at Texas A&M Corpus Christi who was at SSC with the NASA Faculty Fellowship Program this summer, Robert-

The Janus I Pathfinder lifts off from Stennis Space Center.

son and Sykes successfully launched their prototype Pathfinder rocket and payload July 31. Throughout their project, the students benefited from the expertise of several NASA mentors including Bryon Maynard, aerospace technologist, Propulsion Systems and Technologies, who helped with the technical aspect. Dr. Nathan Sovik, an aerospace technologist with NASA's Earth Science Applications (ESA) Directorate at SSC, mentored Robertson in the payload aspect of the project.

Sykes, a native of Tucson, Ariz., and a senior at St. Gregory College Preparatory School there, plans to study aeronautical engineering in college. His goal is to have a career designing new technologies. His role in the project was to conduct the research, develop the plan for the launch and help build the Pathfinder rocket.

Robertson, a sophomore computer and electrical engineering student at the University of Missouri in Columbia, Mo., hopes to one day work for NASA's Space Shuttle program. He worked on the scientific payload and was tasked with obtaining digital imagery and real-time telemetry during the rocket's flight and on descent of the payload.

The students went through, on a miniature scale, many of the same kinds of launch processes that NASA scientists practice. They conducted a thorough flight-readiness review, which required them to address every aspect of the project prior to getting a "go" for launch. The day before launching the Pathfinder, Robertson and Sykes presented an overview of the project to SSC Interim Center Director Michael Rudolphi, NASA senior managers and other SSC personnel. They discussed how they met technical requirements, addressed safety considerations and contingencies and reviewed launch and payload recovery procedures.

Propulsion Test Directorate Director Miguel Rodriguez commended Robertson and Sykes for their efforts. "To see these students go through what they had to in order to launch the rocket filled me with hope – hope, because it is good to see kids interested in space as well as in science and engineering," he said.

The success of the project may lead to a plan for an annual engineering design competition for high school and college student teams.

NASA aerospace technologist Bryon Maynard, right, helps Tyler Robertson, left, and Matt Sykes, center, student interns at Stennis Space Center (SSC), prepare to launch a high-performance prototype rocket they built as a summer project.

Tyler Robertson, left, and Matt Sykes, student interns at Stennis Space Center (SSC), construct a high-performance prototype rocket they built and launched with a scientific payload. The success of their project may lead SSC to explore the possibility of hosting a national design engineering challenge.

First Response Facility construction on the way

Preparations are under way to begin construction of Stennis Space Center's future First Response Facility at the intersection of Trent Lott Parkway and Saturn Drive. Timber has been cut from the 24-acre site, and clearing will begin soon on the seven acres around the future building. When completed in approximately three years, the 41,000-square-foot facility will house SSC's fire department, security force, medical clinic, emergency operations center and energy management and control system.

SAFETY CORNER

Seeking shelter from the storm

When a storm threatens South Louisiana and coastal Mississippi, Stennis Space Center (SSC) employees are advised to seek shelter in their local communities.

However, SSC employees and their families can also shelter at the center during a hurricane or other storm. Whether employees shelter on-site or go to a shelter near home, they should plan to stay there two or three days and will need to take the following items:

- Flashlight with extra batteries, blankets, water (1 gallon per person per day recommended), portable radio/TV with extra batteries, nonperishable food items, manual can opener, prescription drugs, baby-care items (diapers, formula, etc.), and portable entertainment (book, deck of cards, etc.).
- The following items are not allowed at any shelter: alcohol, non-prescription drugs, weapons and pets.

Clyde Dease, SSC emergency coordinator, recommends employees call their local Civil Defense director to locate storm shelters in their communities.

On-site, buildings are opened to the following people in order of priority:

Rideout crews (teams of people designated by their employing agencies to stay with their facilities through the storm); SSC employees and their families; general public.

Buildings 1100 and 1002 are the first to be opened as shelters. Other primary shelter facilities are Buildings 2101, 2201, 1000 and 1005.

Anyone who would like to volunteer to become an on-site shelter manager should call Dease at ext. 8-1905.

During a storm or other emergency, call (228) 688-3777 to get a recorded message about site closings, or go to the SSC Web site, *www.ssc.nasa.gov/* and click on the red letters "SSC Site Status."

QUICKLOOK

Geomatics Conference and Trade Show held in Choctaw. The Geomatics Coordinating Council (GCC), chaired by Dr. David Powe of NASA's Earth Sciences Applications (ESA) Directorate, hosted a Geomatics Conference and Trade Show on Aug. 19-20 at the Silver Star Hotel & Casino in Choctaw. The event, attended by nearly 150 representatives of state, county and local governments, academia and private industry, was held to educate potential customers on geospatial applications. It also showcased Mississippi companies that provide imagery, surveying, mapping and GIS products and services.

Professional development training available this fall. The fall course schedule at Stennis offered by the University of Southern Mississippi – Gulf Coast Campus and Center for Higher Learning includes Launch Vehicle Systems Design and Engineering; Liquid Rocket Engine Design; Basic Government Contract Management Course; Cryogenic Propulsion System Design; Space Principles and Operations for Non-Technical Professionals; Advanced Contract Management; Developing High Performance Teams; Listening and Communication Skills; and Motivational Skills. To register, call (228) 867-8777 or fax to (228) 867-7775.

Employees can help plan the International Festival. The Stennis International Festival will be held Oct. 23 with the theme "Embracing One World, Many Cultures." Employees are encouraged to participate in planning the festival, which is being sponsored by site agencies and contractors. If you have an idea for a cultural performance, would like to donate an ethnic dish or be willing to set up a cultural display or artifacts, please contact your agency or contractor representative. For information, call the NASA Office of Equal Opportunity at ext. 8-2079.

Wilbur and Orville Wright made their historic first flight Dec. 17, 1903. In support of NASA Quest's Centennial of Flight Project, LAGNIAPPE offers trivia questions about NASA's role in flight each issue during the yearlong celebration.

Q. What rule of supersonic flight did NASA aerodynamicist Richard Whitcomb discover in 1950?

A. The Area Rule, which states that, in order to produce the least amount of drag when approaching supersonic flight, the cross-sectional area of an aircraft body should be consistent throughout the aircraft's length. To compensate for the place on an aircraft where the wings are attached to the fuselage, the fuselage needs to be made narrower so that the cross-section remains the same. This is why aircraft that are designed to fly near the speed of sound have a pinched fuselage where the wings are attached to the body.

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